CHAPTER 5

WIRELESS TELECOMMUNICATION INDUSTRY IN MALAYSIA: TRENDS, CHALLENGES, AND OPPORTUNITIES

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5.0 Introduction

The wireless telecommunication industry in Malaysia is exhibiting obvious signs of a gradual industry paradigm change and symptoms of a market in transition. Bolstered by the rapid evolution of wireless technologies and the increasing demands of the customers for more sophisticated wireless services, the paradigm of wireless telecommunication services is now shifting from voice-centred communication to a combination of high-speed data communication and multimedia. In addition, factors such as the high wireless penetration rate, the introduction of wireless network portability (WNP), and the entrance of non-traditional players, such as mobile virtual network operators (MVNOs), all contribute to emphasise the appearance of a transitional period in the wireless market. Due to the changing market dynamics and consumer demands, the traditional business models of wireless service providers are becoming increasingly obsolete; thus creating the need for innovating their business model. In the 2011 annual report of Maxis, it is stated that "traditional business models are being challenged by newer players leveraging shifts in consumer behaviour, increasing ubiquity in connectivity and a proliferation of smart mobile devices" (Maxis Berhad, 2011, p. 96). The dire need for new business models to accommodate the changing market condition is further underscored by DiGi's chief executive officer Henrik Clausen, who stated that "there is no doubt that if we do not change, if we do not reinvent our business, we will stop growing" (Singh, 2012).

In the past few years, the traditional voice and messaging business of wireless service providers was severely affected due to the widespread use of Over-The-Top (OTT) applications and the stiff competition in the voice and messaging tariffs. This situation reveals that wireless service providers cannot solely rely on traditional revenue streams to sustain their operations in the future (Kuo & Yen, 2009). Therefore, aside from these conventional revenues, wireless service providers have to seek other sources of revenue from the growing market segments, such as mobile Internet, broadband, and device bundling offers to increase their profitability.

Thanks to the robust adoption of smart connected devices, along with the growing affordability of data plans and the unprecedented advancement in wireless network technologies, the usage of mobile Internet and broadband is booming in Malaysia and therefore opening up a sizeable revenue opportunity for wireless service providers. The phenomenal growth of mobile Internet and broadband also reflects that customers are increasingly substituting the traditional voice and messaging services with data-based services. Celcom Axiata Bhd recently released its first-quarter financial results for the financial year 2013 and stated that "significant changes are already affecting the industry such as the rapid demand in data. To meet this demand we have begun a comprehensive and holistic approach to data looking at it from revenue opportunities...and new business models" (Axiata Group Berhad, 2012).

5.1 Overview of the Malaysian Wireless Telecommunication Industry

Over the last 20 years, the Malaysian wireless telecommunication industry has undergone substantial changes as a result of liberalisation, expansion, and consolidation. Before the 1990s, the sector was dominated by Telekom Malaysia (later TM). In 1993, Telekom Malaysia's monopoly on the telecommunication sector was broken when the Time Engineering Group received an operating licence for its mobile subsidiary, Time Wireless. Throughout the 1990s, additional licences were granted to five companies: Mobikom, Celcom, Maxis, Mutiara Swisscom (now branded DiGi), and Sapura Digital. Even though liberalisation held potential benefits for the wireless market, seven operators serving a market of 20 million people at most was unsustainable. Particularly for new players that struggled to profit from the small wireless customer base, which, for much of the decade, only numbered in the hundreds of thousands. The 1997-98 Asian financial crisis also took its toll on company margins, leaving even successful operators, such as Celcom, deep in debt. Hence, expansion was followed by a wave of consolidation, starting with the merger of Sapura Digital and Time Wireless to create Time Cel, an entity that was purchased by Maxis in 2002. Mobikom and DiGi were merged into

DiGi.com while a merger of TM Cellular and Celcom created TM Celcom. In 2008, TM Celcom was demerged, with TM exiting the wireless business and Celcom continuing to offer wireless services as a member of the Axiata Group (Oxford Business Group Malaysia, 2011).

Two decades of revolution have thus produced four industry players: Maxis, Celcom, DiGi, and U Mobile. Among the wireless service providers, Maxis took the lead in market share in respect of the provision of wireless services. In 2011, Maxis held 37% (14 million subscribers), Celcom had 33% (11.98 million subscribers), while DiGi had 27% (9.9 million subscribers) (Oxford Business Group Malaysia, 2012). U Mobile, a relative newcomer, had racked up two million subscribers by mid-May 2012 since launching its network in early 2008 ("U Mobile hits 2m registered users," 2012).

Over the last 10 years, the wireless telecommunication sector in Malaysia has witnessed a tremendous growth in the number of subscribers. In 2002, there were only about 9.05 million subscribers in total, or a 36.9% penetration rate per 100 inhabitants. This figure has risen drastically to approximately 41.33 million subscribers and the wireless penetration rate per 100 inhabitants stood at 142.5% by 2012. The wireless penetration rate, which surpasses the 100% mark, implies that the wireless telecommunication market in Malaysia has reached saturation point, in other words, it has attained market maturity. In addition, Malaysia has the third-highest wireless penetration rate in the ASEAN countries, after Singapore and Vietnam (Malaysian Communications and Multimedia Commission, 2013).

5.2 Challenges Faced by Wireless Service Providers

At the time of market saturation and ferocious competition, wireless service providers are looking for better ways to improve their profitability. However, the dynamics of the wireless market have changed in the past few years and wireless service providers are grappling with arduous challenges to achieve their objectives. The subsequent sections will examine the challenges facing the wireless carriers in Malaysia.

5.2.1 High Proportion of Prepaid Subscribers Relative to Total Subscribers

In general, there are more prepaid subscribers compared to postpaid subscribers in the Malaysian wireless market; a ratio of 82:18. The ratio translates into 33.95 million prepaid subscribers and 7.38 million postpaid subscribers as of the fourth quarter of 2012 (Malaysian Communications and Multimedia Commission, 2013). With a large prepaid subscriber base, wireless service providers are suffering from a high churn rate or low customer loyalty as subscribers often have no qualms switching between networks, based primarily on pricing and availability (Leong, 2012).

5.2.2 The Implementation of Wireless Number Portability (WNP)

Wireless number portability is a service that allows wireless customers to retain their existing phone number when switching from one service provider to another (Shin & Kim, 2007). The main regulatory objectives of WNP are to mitigate the inconvenience caused by switching networks and to lower switching costs (Lee et al. 2006). Since WNP has removed the switching barriers, it will break old traditions and create a new wireless telecommunication environment in which subscribers have better freedom of choice and control to change service providers.

In Malaysia, WNP was introduced at the right time, on 15 October 2008, when the country's wireless penetration rate stood at 98.9% by the end of the year. According to the Malaysian Communications and Multimedia Commission (MCMC), it was timely to implement WNP since the market had entered a relatively mature phase, and, at that point, such an initiative would provide a further boost to enhance competition within the market, which would benefit the consumers ("Mobile Number Portability (MNP) THE JOURNEY",

2009). With the increased competitive pressure, wireless service providers need to intensify their marketing activities as well as improve the overall value currently being offered to customers by lowering prices, improving the quality of service, and providing new and innovative products and services in a bid to retain and expand their subscriber base. Hence, the availability of WNP is expected to bring substantial benefits to wireless subscribers, including lower price, greater choice, higher quality, and a wider range of value-added services. In particular, dissatisfied subscribers can make use of WNP to re-choose the wireless service provider that best meets their needs without incurring switching costs as a result of changing their phone number (Shin & Kim, 2007; 2008).

Since consumers can take full advantage of WNP to change their carriers, wireless service providers are struggling to retain their current subscribers or to reduce customer churn. As indicated in the report by Euromonitor International (2012), the switching rate of wireless customers from one operator to another has been high in Malaysia since the launch of WNP. This is because subscribers have become more sensitive to new plan launches and promotional offers by all the service providers under the WNP environment, and are willing and ready to switch to a new service provider to obtain their preferred plan.

5.2.3 The Competition of Mobile Virtual Network Operators (MVNOs)

The emergence of MVNOs, which can better cater to specific market segments, have paved the way for an even more vibrant wireless telecommunication landscape. As of July 2013, there were 13 MVNOs in Malaysia: TuneTalk, XOX COM, Merchantrade, Redtone Mobile, OKTEL, Salamfone, Happy Prepaid, Tron, SpeakOut Wireless, Clixster, MY Evolution, Smart Pinony, and Buxx me. However, the arrival of MVNOs in an overcrowded market could pose tough challenges to the incumbent mobile network operators (MNOs) since the new entrants are trying to attract the existing subscribers of MNOs through aggressive tariff plans to rapidly increase their subscriber base. The incumbent MNOs, which are unable to offer competitively priced mobile plans, will lose their market share to these pricing-cutting MNVOs, particularly in the prepaid arena. Thus, the advent of MVNOs is expected to provoke cut-throat competition among wireless carriers and cause the prepaid tariff rate to decline further. As the incumbent MNOs need to compete stiffly with MVNOs on the tariff rates, they will continue to face pressure relating to pricing in the prepaid segment.

5.2.4 Voice and Messaging Services Market is Saturated and the Profit is Dwindling

In the twentieth-century, the use of voice and messaging services grew drastically and became a revenue mainstay for wireless service providers across the globe. However, due to the subscriber growth saturation and the price competition in the voice and messaging business, the average revenue per user of wireless service providers continues to plummet, thereby adversely affecting their total revenue and profitability (Chen & Cheng, 2010). Furthermore, with the rising competitive pressure brought by WNP and MVNOs, wireless service providers will need to slash their tariff rates for voice and messaging services in the battle to win new customers and retain existing customers. As a consequence, their bread-andbutter revenue generated from voice and messaging services has been significantly eroded. As reported by CIMB Equity Research (2013), wireless service providers in Malaysia have experienced sluggish growth in their total wireless service revenue in the last few quarters from 6% growth to just 1.6% in the third quarter of 2012. This can be attributed to a sharp slowdown in non-voice revenue growth, while voice revenue contracted slightly by 0.4%. As SMS revenue began to dwindle in the second quarter of 2012, the growth of non-voice revenue had slowed from about 20% in mid-2011 to just 5% in the third quarter of 2012. Specifically, in the third quarter of 2012, all three major telcos Maxis, Celcom, and DiGi – had recorded a year over year (yoy) decline of 8%, 3%, and 2% in their SMS revenue, respectively.

5.2.5 Traditional Voice and Messaging Business Comes Under Siege from Over-The-Top (OTT) players

Owing to the increased penetration of smartphones and the growing popularity of Operating System (OS) application ecosystems, OTT applications, such as Viber, WhatsApp Messenger, and WeChat, now pose a tremendous threat to the traditional voice and messaging business. Ovum indicated that the increased use of OTT messages by consumers had cost wireless service providers US\$13.9 billion in loss of SMS revenue in 2011 and US\$8.7 billion a year earlier. Ovum expects the decline, which accounted for about 9% of total revenue in 2011 and nearly 6% in 2010, to accelerate as the messaging applications become increasingly pervasive (Sidhu, 2012). In 2013, Ovum forecasted that wireless service providers will lose US\$32 billion in SMS revenue to OTT messages, and that this number will surge to US\$86 billion in 2020 (Smith Micro Software, 2013). In addition, research by Informa, a media consultancy, confirmed that OTT messages, such as Apple's iMessage and WhatsApp's messenger, are now more popular than SMS texts (Evans, 2013).

In Malaysia, wireless carriers have not been immune to worldwide trends that favour OTT messages over SMS texts as they had seen their SMS revenue decline by a steep 3% in 2012; this was the first time that it had happened after many years of positive growth. Meanwhile, the year over year (yoy) change in outgoing SMS per subscriber had plunged by 11%, from 2,540 SMS per subscriber in 2011 to 2,261 SMS per subscriber in 2012 (Khoo, 2013). Likewise, a recent report by HwangDBS Vickers Research (2013) showed that, the volume of SMS per subscription fell by 24% yoy in the third quarter of 2012, the tenth consecutive quarter of year over year (yoy) decline.

Similar to a sharp drop-off in SMS revenue, the booming use of OTT applications are making significant inroads into the voice revenue. Ovum estimates that between 2012 and 2020, OTT voice over Internet Protocol (VoIP) will cost the global telecommunications industry US\$479 billion in lost cumulative revenue, which represents 6.9% of cumulative total voice

revenue (Green & Obiodu, 2012). According to the Analysis Mason estimates, OTT applications could account for as much as 16% of voice revenue in Western Europe by 2017 (Sale & Rebbeck, 2011). A report by HwangDBS Vickers Research (2013) indicated that voice revenue remains weak in Malaysia, only growing at a low single-digit in Malaysia during the first quarter of 2010 to the third quarter of 2012, probably due to the increased use of OTT applications for making free phone calls among wireless customers.

5.2.6 High Subsidies on Handsets

In an endeavour to stimulate smartphone penetration and mobile Internet adoption, wireless service providers have aggressively offered smartphone subsidies to their customers. Although the increased smartphone subsidies could lead to a higher average revenue per user and uplift the mobile Internet revenue, wireless carriers are challenged by high operational expenses (Opex) and low earnings before interest, tax, depreciation and amortisation (EBITDA) margins (Gillet, 2011). In Malaysia, Maxis Berhad saw its EBITDA plummet by 1% or RM11million in the first quarter ended 31 March 2013 due to higher operating expenses (Opex), possibly from the high subsidies on smartphones ("Maxis Q1 earnings at RM475m, tax-exempt dividend 8 cents", 2013).

5.3 Opportunities Presented by the Current Market Situation

Despite the challenges discussed above, business opportunities still abound for wireless service providers to generate new revenue from areas such as mobile Internet, wireless broadband, digital contents and applications, as well as 4G LTE data services and digital contents (as presented in Table 5.1). The following sections will discuss the potential business opportunities from among which wireless service providers can take advantage.

5.3.1 The Mobile Internet Segment Holds Rosy Prospects

Driven by the more affordable smartphones and mobile Internet packages that are available in the market, along with better network coverage and connection speed, as well as the growing prevalence of mobile applications, the usage of mobile Internet continues to be on a sharp upward trend. In the "Global Mobile Data Traffic Forecast Update, 2011-2016" white paper published by the global networking equipment giant Cisco Systems, the worldwide mobile Internet data traffic is projected to increase 18-fold between 2011 and 2016. Meanwhile, mobile Internet data traffic will grow massively at a CAGR of 78% from 2011 to 2016, reaching 10.8 exabytes per month by 2016 (Cisco, 2012). Therefore, the prospects of the mobile Internet segment are brightening, given that the revenue generated from this segment had increased by 21% yoy and reached US\$244.2 billion in 2012 (ABI Research, 2013). In Malaysia, the number of mobile Internet users has grown by leaps and bounds over the past few years. According to the annual Yahoo! Net Index Survey 2011, the number of mobile Internet users in Malaysia has increased immensely - more than doubled since 2010, with growth spurred mainly by those in the 15 to 25 year age group ("Malaysians spend RM46/month on mobile web", 2011). In addition, Opera's State of the Mobile Web Report, October, 2008 revealed that Malaysia has the highest mobile Internet growth in Southeast Asia (Opera, 2008).

5.3.2 Bright Prospects for the Wireless Broadband Segment

In the new era of computing, tablet ownership continues to increase as more people prefer to use this smaller, more convenient device everywhere they go to surf the Internet. According to a new forecast from the International Data Corporation (IDC) Worldwide Quarterly Tablet Tracker, tablet shipments are expected to reach 229.3 million units in 2013, up 58.7 per cent from 144.5 million units in 2012. In 2013, tablet shipments will edge out portable PC shipments, and outrun the entire PC market by 2015 (International Data Corporation, 2013).

As tablet adoption continues to rise, it presents an important incremental growth source for wireless service providers in the emerging market of wireless broadband. Tablets, which can connect to the Internet through Wi-Fi or 3G/4G, are helping stimulate more wireless broadband subscriptions. A new report by Strategy Analytics projected that the global wireless broadband subscriptions on tablets will grow 8-fold from 2012 to 2017 – as more than 165 million new tablets will activate wireless data services. It is forecast that by 2017, mobile tablet subscriptions will contribute nearly US\$20 billion to the global wireless telecommunication companies and generate almost three and a half million terabytes of wireless data traffic.

5.3.3 The Increasing Popularity of Digital Content and Applications

Nowadays, digital content and applications are gaining traction in line with the explosive take-up of smart connected devices, and the growing significance of mobility of information and communication technologies in people's lives. Celcom Axiata's chief digital service officer, Afizulazha Abdullah, stated that "digital content may not be contributing significantly to the company's overall business now but providing user content could be a huge business in the future" ("Celcom beefing up digital services. It is moving to a new frontier, says official", 2013). In view of the enormous business opportunities presented by the digital service business, wireless service providers should partner with digital content providers to bring ground-breaking digital lifestyle products, such as mobile apps, games, music, and videos, to their customers. For instance, Maxis Berhad collaborated with nine Independent Software Vendors ("ISVs") to launch the innovative service, which leverages on Machine-to-Machine (M2M) and Maxis Cloud technologies, to both Small and Medium Enterprises ("SMEs") and enterprises (Maxis Berhad, 2012). Most recently, the digital content partnership between Celcom Axiata Berhad and global ICT solutions provider Huawei is expected to generate an additional RM11million to Celcom's revenue by 2013, and result in an average

annual revenue growth of 35% for its digital service business over the next five years ("Celcom eyes revenue boost, targets 35% growth through partnership with Huawei", 2013).

5.3.4 The Roll-Out of 4G LTE (Long Term Evolution) Network

According to a new report from Juniper Research, the global wireless service revenue generated by 4G LTE wireless networks are forecast to grow at a frantic pace once networks are launched, exceeding US\$265 billion by 2016 (Bhas, 2011). With the launch of the 4G LTE service, DiGi Telecommunications foresees its revenue growing by between 5% and 7% in 2013 (Business Times, 2013). Likewise, Celcom Axiata Bhd expects the 4G LTE service will give a boost to its revenue by end-2014 (Zainul, 2013). Given the enormous potential of

4G LTE service, wireless service providers should work closely with smartphone manufacturers and digital content providers to cater for the demand for LTE-enabled smartphones and LTE-based digital products. These LTE-enabled smartphones and LTE-based digital products are expected to drive more wireless data and digital content consumption, which will, in turn, ramp up the total revenue of wireless service providers (Bhas, 2011). Table 5.1 summurized the challenges and opportunities for wireless service providers in Malaysia.

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	Challenges	Opportunities
•	High proportion of prepaid subscribers relative to total subscribers	• The mobile Internet segment holds rosy prospects
•	The implementation of wireless number portability (WNP)	 Bright prospects for the wireless broadband segment
•	The competition of mobile virtual network operators (MVNOs)	 The increasing popularity of digital content and applications
_	- 	• The roll-out of 4G LTE (Long Term Evolution)
•	and the profit is dwindling	network
•	Traditional voice and messaging business under siege from Over-The-Top (OTT) players	
•	High subsidies on handsets	
N	ote: Compilation by authors	

5.4 Recommendations

In the event of challenges, such as the lower postpaid-to-prepaid ratio, the introduction of WNP, the emergence of MVNOs, market saturation in the voice and messaging services, growing proliferation of OTT applications, and high handset subsidies, wireless telecommunication companies that fail to realign their business models to adapt to the evolving market dynamics and customer needs risk not only losing their customers to competitors, but also ultimate erosion of profits and, consequently, failure. In an attempt to help wireless service providers confront these challenges and seize the potential business opportunities, the following sections provide some practical recommendations, which will be beneficial to them, especially when formulating marketing strategies and designing business models.

5.4.1 Migration of Subscribers from Prepaid to Postpaid

As the current market becomes more mature, wireless service providers should shift their strategic focus from acquisition to loyalty and retention, and migration of their existing, relatively low-paying prepaid subscribers to postpaid subscribers with the introduction of more attractive and affordable postpaid tariff plans. This is because, unlike prepaid subscribers who will only purchase credits when they need to use the wireless services, the average revenue per user of postpaid subscribers is secure with a minimum monthly commitment. Thus, the postpaid segment is deemed to be more lucrative than the prepaid segment, given that the average revenue per user for postpaid subscribers is approximately three times that of the prepaid subscribers (Oxford Business Group Malaysia, 2011).

5.4.2 Subscriber Lock-In Strategies

Faced with intense competition, market saturation, and an increase in the rate of customer defection, wireless service providers need to create a subscriber lock-in effect through erecting various switching barriers, in order to inhibit their customers from switching.

Switching barrier generally refers to the difficulty of switching to another carrier by a customer who is dissatisfied with the current service, or to the financial, social or psychological burden that falls on a customer when switching to a new service provider. Hence, the higher the switching barrier, the more a customer is compelled to remain with his or her existing service provider (Kim et al., 2004). Putting it simply, the switching barrier represents any factor that renders it more difficult or costly for consumers to change service providers (Jones, Mothersbaugh & Beatty, 2000). Switching barriers can take many forms, including *loyalty programmes, contractual commitment*, and *bundling of services* (Malhotra

& Malhotra, 2013; Xavier and Ypsilanti, 2008).

5.4.3 Loyalty Programmes

A loyalty programme is commonly defined as "a program that allows consumers to accumulate free rewards when they make repeated purchases with a firm" (Liu, 2007, p. 20). Loyalty programmes are considered as an important element of customer relationship management (CRM), since it is designed to build customer loyalty through providing incentives to profitable customers on the basis of cumulative purchases of a given product or service from a firm (Keh & Lee, 2006; Kim, Shi & Srinivasan, 2002; Yi & Jeon, 2003). In the wireless market, loyalty programmes represent the major component of switching costs, as the membership privileges and accumulated points accrued to customers will automatically be forfeited when they terminate the service contracts or switch to another service provider (Ahn, Han & Lee, 2006). Since loyalty programmes will create a customer lock-in effect that dissuades customers from defection, wireless service providers can offer a wide array of reward and membership privileges to their high-valued customers, as part of their endeavour to heighten customer loyalty and to minimise customer churn.

5.4.4 Contract Commitment

Today, most of the wireless telecommunications companies require their customers to sign a contract for smartphone purchases for a certain length of time (e.g. minimum 12 months) with an early exit penalty imposed for terminating the contract. Due to the high premature contract termination fee, wireless customers will be reluctant to switch even though they are not fully satisfied with their current service providers. Knowing that a contract break fee could lock in customers, wireless service providers can institute stiffer early termination penalties so as to lengthen customer lifetime.

5.4.5 Bundling of Services

As noted by Xavier and Ypsilanti (2008), it is difficult for customers to compare bundled packages offered by alternative service providers in the market, given that most packages involve different combinations of services (voice call, SMS, mobile Internet), service features, and terms and conditions. Therefore, wireless service providers can use bundling to complicate and obscure their pricing because customers do not always understand the relationship between the bundle price and price for each component of service. This can also lead to customers being confused by a huge array of complicated bundles from different service providers, thus inclining them to remain with the service providers they are accustomed to despite the possibility of better offers being available elsewhere. In addition, wireless service providers can bundle the mobile Internet plans with voice calls and SMS to offset the slide in the voice and SMS revenue.

5.4.6 Strategic Partnerships with Over-The-Top (OTT) Players

As the traditional revenue streams of wireless carriers are being severely impacted by the OTT players that provide alternative communication access, wireless service providers should collaborate with the content partners and the prominent OTT players, such as Facebook, Twitter, WhatsApp, KakaoTalk, and WeChat, to offer more attractive mobile packages to their customers. This is in line with the suggestion of Ovum, urging the wireless service providers to collaborate with content partners and OTT players so as to avoid the risk of uncontrolled revenue loss and to ensure the sustainability of their business (Murugiah, 2012).

5.4.7 Innovation as a Key for Differentiation

In today's rapidly evolving marketplace, competitive firms cannot just compete on traditional grounds, such as price and quality, or keep offering similar products. Particularly for technology-related industries, the inevitable trend is to differentiate product offerings by innovation in order to garner a strategic marketing position relative to their competitors (Khin, Ahmad & Ramayah, 2010). Firms that are unable to find ways to differentiate themselves by quickly and consistently delivering new and innovative products will slowly lose their market share to other innovative rivals (Organisation for Economic Co-operation and Development, 2005). As Blazevic, Lievens and Klein (2003) mentioned, innovation is a key determinant for the long-term success of wireless telecommunications companies that operate in a highly competitive, dynamic, and uncertain environment. Considering that very slight differences exist in the mobile packages offered by all the operators in the current marketplace, wireless service providers should be more proactive in offering new and innovative products or services in order to create differentiation, achieve a pioneering advantage, and ultimately ramp up their revenue.

5.4.8 Network Expansion, Modernization and Sharing

In an increasingly data-centric world in which smartphone and tablet owners are using ever more data, they are hoping for faster, less congested networks. In the quest for providing customers with a better surfing experience, wireless service providers should continuously expand and modernise their network infrastructure. In addition, wireless carriers should actively engage in network sharing activities that will help to optimise their resources, improve the speed-to-market of new technologies, and expedite the return on investment (ROI). Most importantly, the revenue gained or the money saved through network sharing can be used effectively to provide better services and invest in new products.

5.4.9 Enhance Negotiating Power with Smartphone Manufacturers

Wireless service providers throughout the world are increasingly feeling the pinch of smartphone subsidies on their EBITDA margins and are seeking workable solutions to alleviate the pressure of high subsidy costs. One of the solutions to reduce smartphone subsidies is pursuing strategic procurement partnerships with the other wireless carriers available in the market. Under such partnerships, wireless service providers can attain greater negotiation power with the smartphone manufacturers by pooling purchases, thereby allowing them to obtain lower prices for smartphones. For instance, Vodafone, China Telecom and Telefónica have strengthened their negotiating power with suppliers by establishing a worldwide alliance to pool the purchase orders of several OpCos. Such collaboration has enabled wireless service providers to win more favourable pricing of devices (Pages & Arlorio, 2012)

5.4.10 Strategic Partnerships with the Low-End Smartphone Manufacturers

In an attempt to solve the issue of hefty subsidies for high-end smartphones (e.g. Apple iPhone, Blackberry, and Android-based smartphones), wireless service providers can consider forming a strategic partnership with low-end smartphone manufacturers to make the smartphone device bundles more affordable for customers, thus lowering the subsidies. Such partnerships have already proven successful in China where China Unicom has collaborated with Xiaomi and Huawei to offer low-priced smartphones along with smart bundled packages of voice calls, SMS, and mobile Internet (Qing, 2012).

5.4.11 Referral Reward Programmes

The long-term profitability of the firm depends critically on new customer acquisition. For their business to grow, firms have waged aggressive marketing campaigns to attract new customers, which includes advertising in both traditional and new mass media as well as offering price promotion (Villanueva, Yoo & Hanssens, 2008). Of these, word-of-mouth (WOM) referrals have been widely recognised as one of the powerful marketing tools to acquire new customers (Ferguson, Paulin, & Leiriao, 2007). This is because the WOM testimonials from existing customers (who are familiar with the firm's products or services) tend to be more persuasive and credible in enticing new customers to purchase the firm's products or services (Xiao, Tang & Wirtz, 2011). Moreover, a WOM referral is much cheaper than other customer acquisition methods and the customers acquired through WOM will exhibit greater revenue contribution, retention, and customer value (Schmitt, Skiera & Bulte,

2011).

Referral reward programmes in which the firm rewards existing customers for bringing new customers have proven to be effective in increasing the likelihood of customers making recommendations to others and attracting new customers (Ryu & Feick, 2007; Xiao, Tang & Wirtz, 2011). Despite its effectiveness in stimulating WOM and acquiring new customers, wireless service providers in Malaysia have devoted relatively less attention to their referral reward programme compared to other customer acquisition methods, such as advertising and sales promotions. Only a handful of wireless telecommunication companies have considered referral reward programmes in their customer acquisition strategy. For example, U Mobile and XOX.com have introduced the "Member-Get-Member" programmes in which existing customers (recommenders) will be rewarded with free credits once they have successfully introduced a new customer to U Mobile or XOX.com. Furthermore, the recommenders will receive free credit from the value of their friends and families (new users) top up. As Ryu and Feick (2007) noted, a referral reward programme can be seen as a key customer relationship management (CRM) tool because in addition to its potential to entice new customers, it can improve retention by rewarding existing customers. Thus, wireless service providers should invest in the referral reward programme since it helps them to kill two birds with one stone – acquiring new customers while retaining existing ones.

5.4.12 Enhancing Promotional Strategies with Social Media Sites

According to a new eMarketer report, "Worldwide Social Network Users: 2013 Forecast and Comparative Estimates", the number of social network users around the world will soar by 18%, from 1.47 billion in 2012 to 1.73 billion in 2013, and reach 2.55 billion by 2017 (eMarketer, 2013). As consumers become more Internet and social media-savvy, wireless service providers can leverage on social media sites, such as Facebook, Twitter and YouTube, for promoting, raising awareness about their products as well as managing their brands. In addition, wireless carriers can also utilise the social media platforms to interact with consumers and obtain their feedback about the products.

5.5 Conclusion

As the wireless communication technologies are evolving at a breakneck speed, customer demand is also keeping pace with these sweeping changes. In order to keep abreast of the current market conditions, wireless service providers should review their business models on a regular basis. In a customer-centric era, wireless service providers need to shift their business strategy from merely selling packages to tracking and meeting customer needs. Hence, a greater understanding of customer needs and their consumption behaviour is crucial to better them with innovative products and services. Furthermore, wireless service serve providers in Malaysia have been undergoing formidable challenges as a result of the postpaid-to-prepaid the introduction the emergence lower ratio, of WNP, of

MVNOs, market saturation in the voice and messaging services, growing proliferation of OTT applications, and high handset subsidies.

Despite these challenges, plentiful business opportunities still exist in the emerging markets, such as mobile Internet, wireless broadband, digital products, as well as 4G LTE-based products and services. By assessing both challenges and opportunities presented by the current wireless market, this chapter provides wireless service providers with some practical recommendations, which include moving subscribers from prepaid to postpaid plans; creating subscriber lock-in; forming strategic partnerships with OTT players and low-end smartphone manufacturers; engaging in innovation initiatives; engaging in network expansion, modernization and sharing effort; enhancing negotiating power with smartphone manufacturers; introducing reward referral programmes; as well as enhancing promotional strategies with social media sites.

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